# CRYPTOSTIGMATID MITES RECORDED FROM HEATHLAND IN DORSET

By N. R. Webb

The heathlands developed on the sandy highly podsolised soils derived from the Tertiary Bagshot Beds, are a characteristic feature of the Poole Basin of Dorset. Although now of lesser extent than formerly, these heathlands have a characteristic vegetation dominated by heather *Calluna vulgaris* (L.) Hull. in association with *Erica cinerea* L., *Erica tetralix* L. and *Ulex minor* Roth.

During the course of population studies of the soil and litter dwelling micro-arthropods, extensive collections were made between 1967 and 1970. These collections, made with a minimum frequency of one per month, were of all soil micro-arthropods, but only details of adult Cryptostigmata (Oribatei) are given here. All collections were made from the heathland National Nature Reserve of Morden Bog, 2 miles north of Wareham (Grid Ref: SY 916938) and Hartland Moor, 2½ miles south-east of Wareham, at which two sites were sampled and which will be referred to as Hartland (Grid Ref: SY 944854) and Middlebere (Grid Ref: SY 959853). The Morden site was an area of old heather of at least thirty years since burning with a well developed litter layer. The Hartland site was in heather about fifteen years since burning with much associated *Ulex minor* and with a moderate litter layer, while the Middlebere site was among heather about eight years since burning. At this latter age the canopy of vegetation begins to close and the litter layer begins to form.

Material was obtained mainly by standard Tullgren methods, soil cores being taken to a depth of 5 cm. At Hartland some material was also examined by clipping off the shoots of the heather plants from which the mites were extracted by heat funnels.

Hypochthoniidae.—*Hypochthonius rufulus* C.L.K. Morden, scarce.

Brachychthoniidae.—*Brachychthonius cricoides* Weis-Fogh, Hartland, a single specimen.

Phthiracaridae.—*Steganacarus magnus* (Nic.), Morden, very abundant, Hartland common, Middlebere, infrequent. *Phthiracarus piger* (Scop.), Morden, Hartland and Middlebere, frequent.

Euphthiracaridae.—*Rhysotritia ardua* (C.L.K.), Morden, Hartland and Middlebere, frequent. *Microtritia minima* (Berl.), Middlebere, infrequent.

Nothridae.—*Nothrus silvestris* Nic., Morden, Hartland and Middlebere, common.

Camisiidae.—*Camisia biurus* (C.L.K.), Morden, a single specimen. *C. segnis* (Herm.), Morden, Hartland and Middlebere, frequent also from Hartland, *Calluna* shoots. *C. spinifer* (C.L.K.), Morden, Hartland and Middlebere, frequent. *Platynothrus peltifer* (C.L.K.), Morden and Hartland, frequent.

Nanhermannidae.—*Nanhermannia elegantula* Berl. (non auct.), Morden, infrequent.

Hermanniellidae.—*Hermanniella picea* (C.L.K.), Morden, very abundant, Hartland, abundant, Middlebere, frequent.

Liodidae.—*Neoliodes thelaproctus* (Herm.), Morden, abundant.

Damaeidae.—*Damaeus onustus* C.L.K., Morden and Hartland, frequent.

Metrioppiidae.—*Ceratoppia bipilis* (Herm.), Morden and Hartland, frequent.

Liacaridae.—*Adoristes ovatus* (C.L.K.), Middlebere, scarce.

Carabodidae.—*Carabodes marginatus* (Mich.), Morden, Hartland and Middlebere, scarce. *C. minusculus* Berl., Morden and Hartland, abundant, Middlebere, extremely

abundant. *Odontocepheus elongatus* (Mich.), Morden, Hartland and Middlebere, frequent.

TECTOCEPHEDAE.—*Tectocepheus velatus* (Mich.), Morden, Hartland and Middlebere, frequent.

OPPIIDAE.—*Oppia nova* (Oudms.) (=*neerlandica* sensu Willmann), Morden, Hartland and Middlebere, frequent. *O. ornata* (Oudms.), Middlebere, frequent. *O. fallax* (Paoli), Middlebere, a single specimen. *O. minus* (Paoli), Middlebere, infrequent.

THYRISOMIDAE.—*Thyrisoma lanceolata* (Mich.), Morden, Hartland and Middlebere, frequent.

PELOPIDAE.—*Pelops bilobus* Sell., Morden and Middlebere, scarce.

ACHIPTERIIDAE.—*Parachipteria coleoptrata* (L.), Morden and Middlebere, infrequent. *P. punctata* (Nic.), Morden and Middlebere, scarce.

CERATOZETIDAE.—*Ceratozetes gracilis* (Mich.), Hartland and Middlebere, frequent. *Trichoribates incisellus* (Kramer), Morden and Hartland, scarce.

MYCOBATIDAE.—*Humerobates rostrolamellatus* Grandj., Hartland, from *Calluna* shoots, a single specimen.

CHAMOBATIDAE.—*Chamobates schuetsi* (Oudsm.), Morden, Hartland and Middlebere, abundant. Hartland from *Calluna* shoots.

GALUMNIDAE.—*Galumna* sp., Hartland, from *Calluna* shoots.

ORIBATULIDAE.—*Oribatula tibialis* (Nic.), Morden, Hartland and Middlebere, frequent.

The faunal list records the presence of a total of 35 species from all of the sites and totals for Morden, Hartland and Middlebere of 26, 23, and 24 respectively. The number of species is, in general, less than recorded from most other types of habitat, especially woodland.

Comparing the heathland sites in Dorset with those sites in other parts of southern England from which Delaney (1956) collected, a greater number of species has been recorded for Dorset, but this may be as a result of more extensive collections. Block (1965) in the northern Pennines, an upland area, recorded more species than in Dorset, but these sites are only common to those in Dorset by the presence of *Calluna*. In spite of these differences, Morden, Hartland and Middlebere have 15, 12, and 16 species respectively in common with Block's list representing about 60–65 per cent of the fauna. Block (1965) mentions that the Pennine fauna may contain an element that is a relict from the Ice Age.

Comparison with the species recorded by Weis-Fogh (1948) for a Danish heathland soil indicates a much lower level of similarity with the Dorset fauna, having only about 30 per cent of its species in common with the Danish fauna.

REFERENCES

**Block, W. C.,** 1965, Distribution of soil mites (Acarina) on Moor House National Nature Reserve, Westmorland, with notes on their numerical abundance, *Pedobiologia* **5**: 244–51. **Delaney, M. J.,** 1956, The animal communities of three areas of pioneer heath in south-west England, *J. anim. Ecol.*, **25**: 112–26. **Weis-Fogh, T.,** 1948, Ecological investigations of mites and collemboles in the soil, *Natura jutl.*, **1**: 135–270.

The Nature Conservancy, Furzebrook Research Station, Nr. Wareham, Dorset.
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*Bembidion quinquestriatum Gyll.* (*Col., Carabidae*) *in N. Kent.*—On the 3rd July, 1970, at West Malling, I took a single specimen of this very local ground beetle, running in the sunshine on an old wall. There are a few old records for the County, but I know of no recent captures.—S. A. WILLIAMS, 79 Cedar Drive, Sutton at Hone, Kent: *January 5th*, 1972.